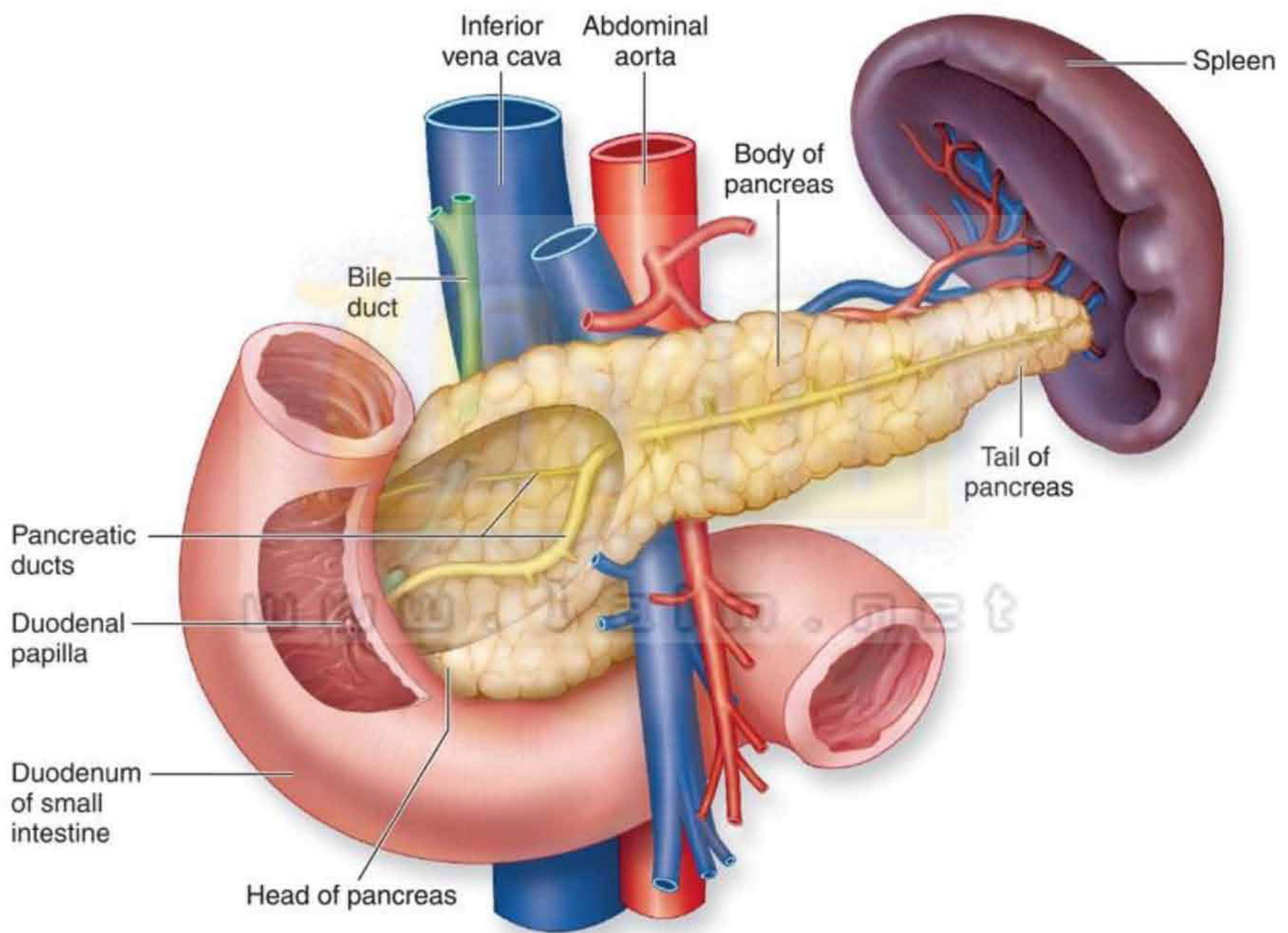


GASTROENTEROLOGY

BILIARY - PANCREAS



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Index:

- **PEPTIC ULCER.**
- **INFLAMMATORY BOWEL DISEASE.**
(UC – CROHN'S D.)
- **IBS.**
- **ESOPHAGUS.** (HIATUS HERNIA –
ACHALASIA – GERD)
- **DYSENTERY.** (BACILLARY – AMOEBIC – B)
- **TUMORS OF GIT.**
- **GALL STONES & CHOLECYSTITIS.**
- **PANCREATITIS.**

VISIT...

LANZAROTE
Caliente.COM

Peptic Ulcer

"mucosal defect in any portion of GI except the ileum
due to exposure to HCL + pepsin"

CAUSES OF PU

Infective

H. PYLORI

- **CA** $\Rightarrow$ G-VE BACILLI "SPIRAL SHAPED".
- **MOT** $\Rightarrow$ FECO-ORAL / SALIVA.
- **PATHOGENESIS:**
 - a) $\uparrow$ GASTRIN $\Rightarrow \uparrow$ HCL.
 - b) $\uparrow$ PEPSINOGEN.
 - c) $\downarrow$ SOMATO-STATIN $\Rightarrow \uparrow$ GASTRIN & HISTAMINE.
 - d) **UREAS SECRETION** $\Rightarrow$ splits UREA $\Rightarrow$ NH_3 + HCL $\Rightarrow$ $\text{NH}_4\text{Cl} \Rightarrow \uparrow$ pH AROUND IT $\Rightarrow$ PROTECTS ITSELF.

non-infective

NSAID

(-) COX .. $\downarrow$ PG

Defective MUCOSAL BARRIER.

$\downarrow$ Mucous.
 $\downarrow$ HCO_3^- .
 $\downarrow$ Bl. Supply.

SMOKING

$\downarrow$ ULCER HEALING /
 $\uparrow$ RECURRENCE

GASTRINOMA

ZOLLINGER-ELISON
TUMOR
"PART OF MEN-I"

RECURRENT PU.
IN UN-USUAL SITES.
NOT RESPONDING
TO TTT.

PDF = 2pts.

LIVER
CIRRHOSIS

$\downarrow$ GASTRIN METABOLISM
 $\rightarrow \uparrow$ HCL

CONGESTIVE
GASTROPATHY

RENAL F.

UREMIA...
 $\downarrow$ GASTRIN
EXCRETION

PU is more:

- 1) $\text{♂} > \text{♀}$
- 2) +ve Fh in DU.
- 3) Blood group "O"

Cl./P of Peptic Ulcer

PAIN

- **site** ⇒ **epi-gastric** ⇒ **pointing sign** / localized tenderness.
⇒ Radiate to back "dt perforation"
- **CCC** ⇒ burning / dull-aching / stabbing.
- **Factors aff. pain of the ulcer...**

	DU "HYPER-SECRETORY"	GU "العكس"
a) MEALS	↓ pain	↑ pain
b) APPETITE	↑ dt hunger pain.	↓ "sito-phobia"
c) WT.	Gain wt.	Loss of wt.
d) PERIODICITY (ON/OFF)	✓ dt partial healing & recurrence.	×

DD of PU:

- 1) PANCREATITIS.
- 2) CANCER PANCREAS.
- 3) CHOLECYSTITIS.
- 4) GERD.
- 5) INF. WALL INFARCTION.

N V GIT bleeding

chronic bl. loss

Iron def. Anemia

INVEST. of PU

ULCER itself

BA MEAL

DU	Deformity of duodenal cap.	Always benign ⇒ no biopsy required.
GU	(bulge on lesser curv.) Ulcer niche.	± malignant from the start ⇒ biopsy required.

Upper Endoscopy

H. pylori

- 1) Anti-bodies.
- 2) +VE UREASE TEST.
- 3) GIEMSA STAIN.

COMPLICATIONS

LUMEN

HGE

HEMATEMSIS / MELENA

IRON def
....ANEMIA

Wall

fibrosis

pyloric STENOSIS
HOUR-GLASS STOMACH

MALIGNANCY

GU is mainly malign.
from the start.
DU always BENIGN.

OUT

PERFORATION

"MORE COMMON IN DU"

supp.
PERITONITIS

"PNEUMO-
PERITONEUM"

PENETRATION

"MORE COMMON IN GU"

fistula E
PANCREAS

Sudden pain
Radiating to Back

TREATMENT OF PU

Indications of surgery

- 1) Failure of medical ttt.
- 2) Recurrent.
- 3) Per - pent.
- 4) Malignancy.

MEDICAL

Diet

SOFT FOOD

(سمك - كيك - بيض)

- 1) AVOID EXCESS MILK.
- 2) AVOID ACIDIC JUICES.
(ليمون - برتقال - يوسفى)

DRINKS

Treatment of Complications

1) HGE:

- Shock TTT. → IV Fluids / BL Transf.
- PU → IV Omeprazole / 12hrs
(40 mg Vial + 100 ml saline)

2) Of perforation – penetration.

DRUGS

TTT FOR 4 – 6 wks TO ENSURE ULCER HEALING

- 1) ANTACIDS ⇒ طعمه وحش
- 2) H_2 BLOCKERS ⇒ Ranitidine. (2 wks.)
- 3) PPI ⇒ Omeprazole. (4-8 wks)
- 4) *h. pylori* ⇒ Heli-Cure®
 - a) Omeprazole.
 - b) Tinidazole.
 - c) Clarithromycin.

Triple Therapy
for 2 wks.

قرص صباحا و مساء

➤ STOP NSAID + SMOKING.

SURGICAL

GASTRECTOMY

VAGOTOMY

Complications of Surgery:

1) DUMPING \$:

- **EARLY:** ↑ INTESTINAL OSMOTIC PR. → PULL FLUID FROM PLASMA IN BL. SUPPLY → HYPO-TENSION & RELEASE OF 5HT / VIP.

LATE: HYPO-GLYCEMIA IN 2ND HR. POST-PRANDIAL DT RAPID G. ABSORPTION → HYPER-GLYCEMIA ↑↑ INSULIN HYPO-GLYCEMIA

2) DIARRHEA

DT VAGOTOMY / BACT. OVER-GROWTH.

3) VOMITING

DT TRAPPING OF FOOD.

4) NUTRITIONAL

MAL-ABS. \$ → IRON & B₁₂ DEF. ANEMIA.
(MEGALO-BLASTIC AN. / SCD)

5) BILIARY GASTRITIS

DT REFLUX OF BILE / PANCREATIC / INTESTINAL SECRETIONS INTO THE STOMACH.

GASTRITIS

	ACUTE GASTRITIS	CHRONIC GASTRITIS
➤ <u>DEF.</u>	ACUTE superf. inflame. of GASTRIC MUCOSA	CHRONIC inflame. of GASTRIC MUCOSA → CARCINOMA
➤ <u>CAUSES</u>	1) <u>DRUGS</u> : • NSAID – Aspirin. • Cortisone – Alcohol. 2) <u>STRESS ULCER</u> → <u>CUSHING ULCER</u> • Hge – Shock. • MI – Stroke. 3) <u>BURNS</u> → <u>CURLING ULCER.</u>	1) <u>TYPE A</u> = Auto-Immune → <i>pernicious An</i> “young ♀” 2) <u>TYPE B</u> = Bacterial → <i>b. pylori.</i> (esp. old age) 3) <u>TYPE C</u> = Chemical → Biliary reflux (post- gastrectomy) 4) <u>CHRONIC ABUSE of NSAID or Aspirin.</u>
➤ <u>CL./P</u>	<u>As PU + Hematemesis.</u> (hematemesis occurs in EV – PU – Gastritis)	<u>As PU but...</u> 1) Discomfort not pain. 2) Pernicious Anemia. “Megalo-blastic An. /SCD” + Auto-immune Thyroid / Vitiligo.
➤ <u>INVEST.</u>	Upper Endoscopy	1) <u>Upper Endoscopy</u> → Biopsy. 2) <u>Anti- parietal & Intrinsic f. Abs.</u>
➤ <u>TTT.:</u>	1) Of the CAUSE / SYMPTOMATIC. 2) <u>LOCAL:</u> • GASTRIC wash by cold saline. • PPI / H2 BLOCKERS / Misoprostol. 3) <u>GASTRECTOMY</u> If failed.	1) Of the CAUSE. 2) SYMPTOMATIC.

INFLAMMATORY BOWEL DISEASES

"chronic non-specific inflammation of the intestine."

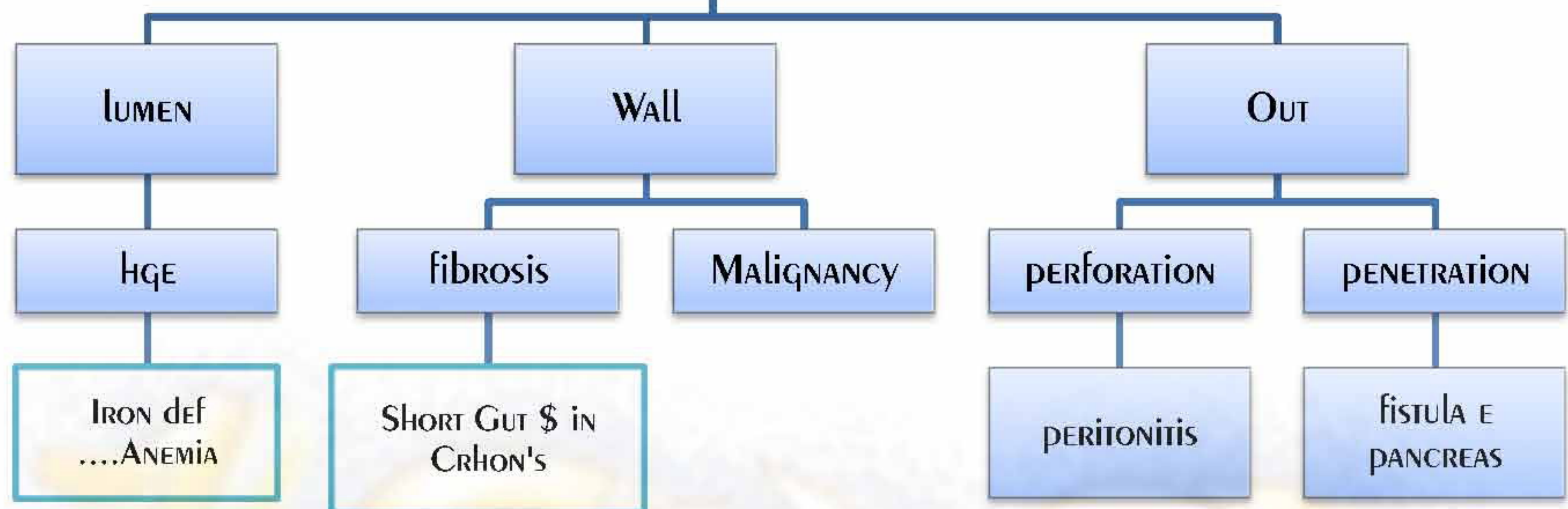
"chronic Diarrhea
Bleeding to Rectum"

Etiology:

- 1) FAMILIAL.
- 2) GENETIC → HLA B₂₇ "as Sero-ve Arthropathy"
- 2) AUTO-IMMUNE.
- 4) DIET → ↑ SUGAR INTAKE IN CRHON'S.
- 3) SMOKING → PROTECTS UC / WORSENS CRHON'S.

	ULCERATIVE COLITIS	CROHN'S DISEASE
MORPHOLOGY SITE	LARGE INTESTINE only a) RECTUM only OR EXTENDS PROXIMALLY. b) WHOLE COLON. c) ± T. ILEUM (BACK-WASH ILEITIS)	Any portion of GIT (FROM MOUTH till ANUS & M/C T. ILEUM & ASC. COLON)
PATHOLOGY	Diffuse LESION – MUCOSA Only a) Crypt abscess. "pus → FUO" b) Inflam. Pseudo-polyps	Skip LESIONS - TRANSMURAL (all layers) a) Cobble stone → Lymphoid hyperplasia. Granuloma in (50% of cases) a) Fistula & abscess
> CL/P		
1) UC. 2) Amoebic / B. 3) CMV Colitis "IC" 4) MESENTERIC OCC.	1) BLEEDING / RECTUM. 2) BLOODY DIARRHEA & MUCOUS. (DD) TENNESMUS. (IF RECTUM IS INVOLVED)	FAHM 1) CHRONIC DIARRHEA. (DD) 2) PAIN IN RT. ILIAC FOSSA "T. ILEUM" ⇒ DD: - Acute appendicitis. Crhon's D T. ileitis. "yersenia" IB\$. - Amoeba. "Coecum" 3) WT. LOSS DT MAL-ABS. \$.
> INVEST.		
	1) BLOOD FOR BOTH: ↑ ESR - CRP - TLC. ANEMIA OF CHRONIC D. (NORMO / NORMO) 2) STOOL EXAM. ⇒ exclude other causes of d. 3) BA ENEMA ⇒ loss of haustrations. 4) ENDOSCOPY ⇒ biopsy.	1) BA A) SI → follow-through → STRICTURE in T. ILEUM B) LI → ENEMA. "STRING SIGN" 2) LI ENDOSCOPY ⇒ biopsy. 3) CT SPIRAL.
> TREATMENT OF IBD		
General	MEDICAL	SURGICAL
1) Diarrhea. 2) Anemia. 3) EI.	1) Sulpha-salazine. 1 st CHOICE in UC (NSAID not used bco, absorbed in SI) 2) CS. 1 st CHOICE in CRHON'S D. (ORAL OR RETENTION ENEMA) 3) IMMUNE-SUPP. "AZATHIOPRINE & CYCLO-SPORIN" 4) ABS FOR 2nd INFECTION.	RESECTION + END TO END ANASTOMOSIS IF: - failure of medical ttt. - Complications.

COMPLICATIONS OF IBD



➤ EXTRA-INTESTINAL MANIFEST . of IBD:

- 1) **JOINTS** ⇒ SACRO-ILITIS = ANKYLOSING SPONDYLITIS.
- 2) **EYE** ⇒ UVEITIS.
- 3) **SKIN** ⇒ ERYTHEMA NODOSUM.
- 4) **LIVER** ⇒ AUTO-IMMUNE HEPATITIS.
PSC "1^{RY} SCLEROSING CHOLANGITIS"
- 5) **RENAL** ⇒ AMYLOIDOSIS KIDNEY.

ERYTHEMA NODOSUM:

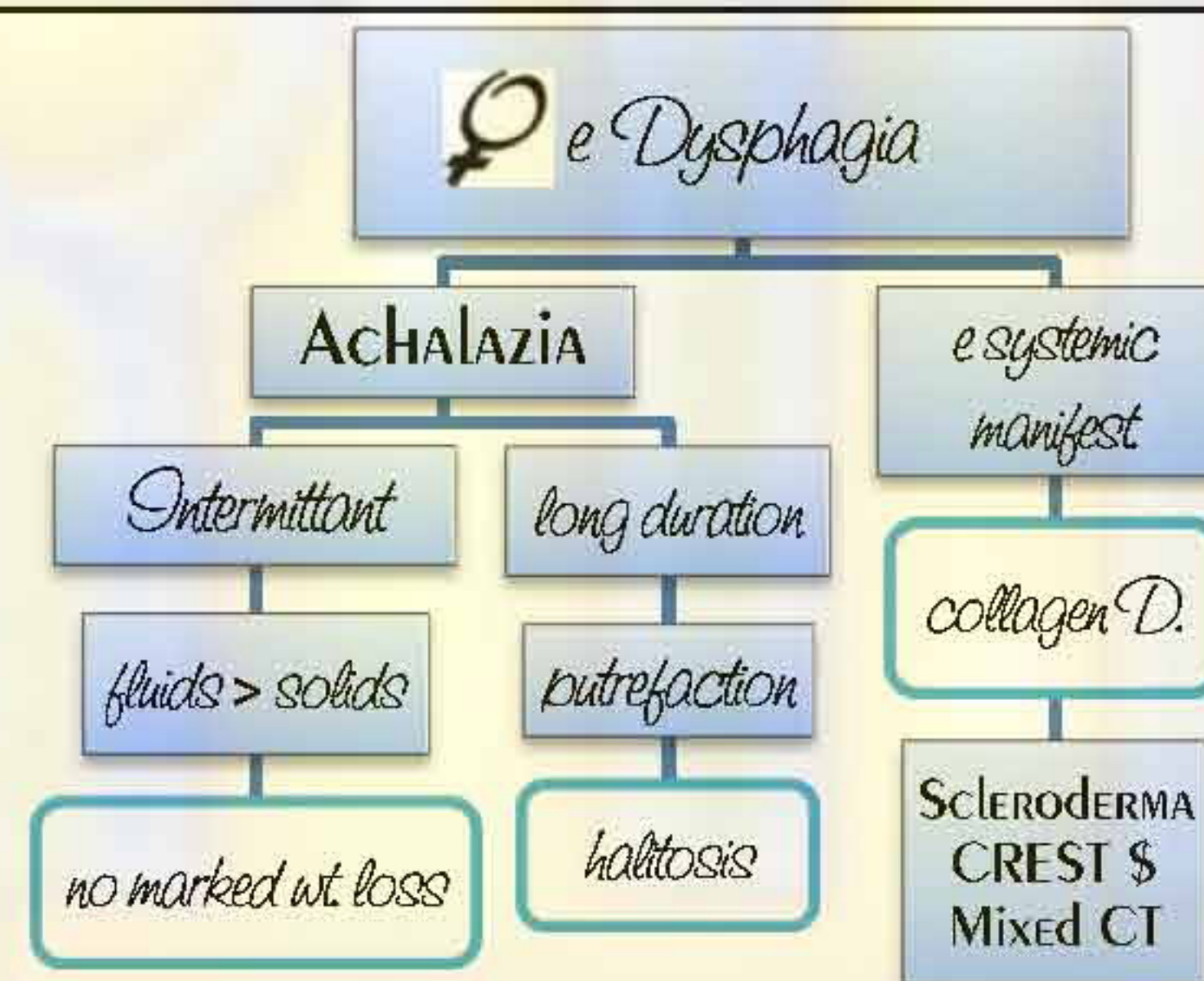
- 1) SARCIDOSIS – TB.
- 2) IBD.
- 3) POST-STREPTOCOCCAL.
- 4) HAIRY CELL LEUKEMIA.
- 5) Idiopathic.

Sulpha-Salazine = 5-ASA + Sulpha "CARRIER"

- not absorbed in SI.
- Reach LI.
- broken by b. flora & release of 5-ASA.
- Anti-inflam. In LI.

G	HIATUS HERNIA	ESOPHAGEAL ACHALAZIA	GERD
DEF.	Herniation of part of the stomach into the chest.	↑ LES tone + Atony in esoph. wall.	reflux of acidic-gastric content into oesoph.
Pathog.	TYPES <u>sliding hh</u> LES slides upwards to chest → Loss of LES tone <u>para-esophageal hh</u> Fundus rolls up along the side of the esoph. But, Junction remains in Normal pos.	1) deg. of myenteric n. plexus. 2) Lesion in the NO secreting neurons.	RF for ↑ GERD dt ↓ LES TONE: - OBESEITY. - COFFEE. - NITRATES CCB. (TTT. OF ISHD) - PREGNANCY - HIATUS HERNIA. - SMOKING. - CHOCOLATE. - TIGHT CLOTHES.
➤ CL./P			
	GERD (NOT RESPONDING TO TTT.) 1) Heart burn. (worse during sleep) 2) Dysphagia.	No GERD but..... 1) MEDIASTINAL \$ IF SEVER. 2) VOLVOULUS OR STRANGULATIONS DT CUT OF BL. SUPPLY.	1) Heart burn. 2) Chest pain (DD e MI). DT OESOPH. SPASM 3) Dysphagia. 4) Pulmonary .. COUGH DT CX IRRITATION & ASPIRATION. ➤ Complications of GERD: a) Esophageal Ulceration → hematemesis / Melena. b) Stricture of oesoph. c) Barret's ppe soph. ... "pre-malignant adeno-carcinoma dt columnar metaplasia of lower oesoph. d) Reflux induced laryngitis.
➤ Invest.	1) BA SWALLOW & 2) ENDOSCOPY.	1) BA SWALLOW... parrot peak. 2) ENDOSCOPY. 3) CXR .. absence of gases in fundus. 4) MANOMETRY.	1) BA SWALLOW. 2) ENDOSCOPY. 3) ↓ PH AT LOWER ESOPH. 4) MANOMETRY.
➤ Ttt.	a. ↓ Acidity → ANTACIDS + H₂ BLOCKERS + PPI. b. ↑ LES TONE → DOMPERIDONE. "Motilium" c. <u>SURGERY IN SEVERE RESISTANT CASES.</u>	1) Endoscopic dilatation. "of choice." 2) BOTULINUM TOXIN. 3) CARDIO-MYOTOMY. "Heller's op." 4) Old AGE → NITRO-GLYCERINE + CCB "Nifedipine"	LIFESTYLE: Avoid PDF + RAISE HEAD OF THE BED. 1) MEDICAL as hh. "esp. Motilium" 2) SURGERY → LAPAROSCOPY → FUNDIC WRAPPING → "NISSEN FUNDOPLICATION"

➤ **CL./P**



1) GERD ⇒ ASP. DURING SLEEP ⇒ CHEST INF.

2) Chest pain dt ABNORMAL VIGOROUS NON-PERISTALTIC CONTRACTION OF OESOPH.

	AMOEBIC DYSENTERY	BACILLARY DYSENTERY	BILHARZIAL DYSENTERY
• CA	Cystic form of <i>E. histolytica</i>	<i>Shigella</i> group	<i>S. Mansoni</i> mainly - <i>S. Haemtobium</i> .
• MOT	FECO-ORAL ... by flies.	FECO-ORAL ... by flies.	SEE TROPICAL
➤ CL./P.	1) ASYMPTOMATIC CYST PASSERS. 2) <u>ACUTE AMOEBIC DYSENTERY</u>: - Diarrhea with mucous & blood. - Tenesmus. - Rt. Iliac pain → DD for acute appendicitis. 3) <u>CHRONIC INTESTINAL AMOEBIASIS</u>: - Attacks of diarrhea or dysentery. - Bouts of constipation.	<u>children < 5 ys. e IP: 48 hrs.</u> • FAHM . • Abd. Pain. • DYSENTERY + DIARRHEA UPTO • Dehydration in s. cases.	<u>Colonic and Hepatic B</u> • B Dysentery. • BLEEDING / RECTUM. • ANEMIA & clubbing e intest. polyps. • PORTAL HTN ⇒ HSM • Bilharzioma (gr. mass) in <u>Lt. iliac fossa</u> mistaken for Cancer colon.
➤ COMP.	1) AMOEBIC LIVER ABSCESS. 2) AMOEBOMA (gr. mass) in coecum & rectum 3) HGE. & STRICTURE.	<u>REITER'S \$</u> • ARTHRITIS. • CONJUNCTIVITIS • URETHRITIS.	<u>of complications.</u>
➤ INVEST.	1) Stool ⇒ vegetative or cyst forms. 2) Sigmoidoscopy ⇒ flask shaped ulcers. 3) US OR CT ⇒ D. of amoebic liver abscess. 4) SEROLOGY ⇒ Abs by immune-florescence.	1) Stool ⇒ ↑WBCS RBCs + org. 2) Sigmoidoscopy ⇒ mucosa is RCOS e pseudo-membrane.	1) Stool ⇒ B ova. 2) Sigmoidoscopy ⇒ ulcers or polyp 3) Blood ⇒ anemia & esoniphila. 4) SEROLOGY ⇒ see Tropical D. 5) BA ENEMA.
➤ TREATMENT			
	1) INTESTINAL AMBIASES → Tinidazole *(t. & luminal amoebicidal) 2) LUMINAL CYSTS → Diloxamide 3) AMOEBIC LIVER Abscess → Flagyl inf. + 3rd G CS. ➤ RE-EXAMINATION OF STOOL 4 wks later.	<u>Shigelosis is ACUTE SELF-LIMITING SO IN SEVER CASES:</u> 1) Fluids. 2) ABS: (Ciprofloxacin) 3) Anti-spasmodics.	1) Anti-B Drugs: SEE TROPICAL. 2) Symptomatic & Comp. TTT. 3) Colonoscopic polypectomy.

TUMORS OF GIT

	CANCER ESOPHAGUS	CANCER STOMACH	CANCER COLON	CANCER PANCREAS
1) AGE & SEX	old ♂ 60 ys.	♂ 45 ys.	old ♂ 60 ys.	old ♂ 60 ys.
2) HIGH RISK:	SMOKING + ALCOHOL + DIET (↓ FIBER + ↑ FAT)			
	1) Achalazia. 2) BARRET'S OESOPH. (long-standing GERD → chronic esophagitis → columnar metaplasia of lower esoph.) 3) Tylosis. 4) plummer VINSON \$ in ♀	1) <u>chronic gastritis</u> : a) h. pylori. b) <u>AUTO-IMMUNE</u> • Pernicious an. (Megalo-blastic) • SCD. 2) <u>ADENOMETOUS POLYP.</u>	1) Familial Polyposis. 2) FH. 3) <u>ULCERATIVE COLITIS.</u> MC site is sigmoid colon. - old m. - recent onset of constipation. - Wt loss	1) Chronic pancreatitis. 2) Exposure to petroleum products. - old m. - obst. Jaundice. - Wt loss
➤ PATHOLOGY	➤ GROSS ⇒ fungating mass – infiltrating mass – Malignant ulcer ➤ MICRO ⇒ Adeno-CARCINOMA (M/C) / BARRET'S ESOPH. (columnar metaplasia in lower oesoph.) / Gastric Lymphoma.			
➤ CL./P. of TUMORS C A M.				
1) <u>PROGRESSIVE DYSPHAGIA</u> : - short duration. - solids then to fluids. - Wt loss. dt CAM. 2) MEDIASTINAL \$. 3) LATE ⇒ eosph. obstruction ⇒ diff. swallowing	1) <u>MANIFEST. OF PU</u> - no response to ttt → Endoscopy for biopsy. - hematemesis → PAINFUL & NOT PROFUSE. - Anorexia esp. to meat 2) <u>DYSPHAGIA</u> IN FUNDIC TUMORS. NB: - DU is Almost always Benign. - GU maybe Malignant from the start, so biopsy is required.	<u>MOSTLY ASYMPTOMATIC</u> "IF CRACINOMA IN COECUM" 1) <u>change in bowel habit & e recent onset of constipation.</u> 2) <u>LT. SIDED ABD. PAIN.</u> 3) <u>BLEEDING/RECTUM (NOT PROFUSE)</u>	HEAD CARCINOMA PAIN Epi-GASTRIC radiating to back. CBD obst. Obst. jaundice ↓ GB dilatation ↓ palpable GB Cour voisier's sign	

➤ MANIFESTATIONS OF SPREAD

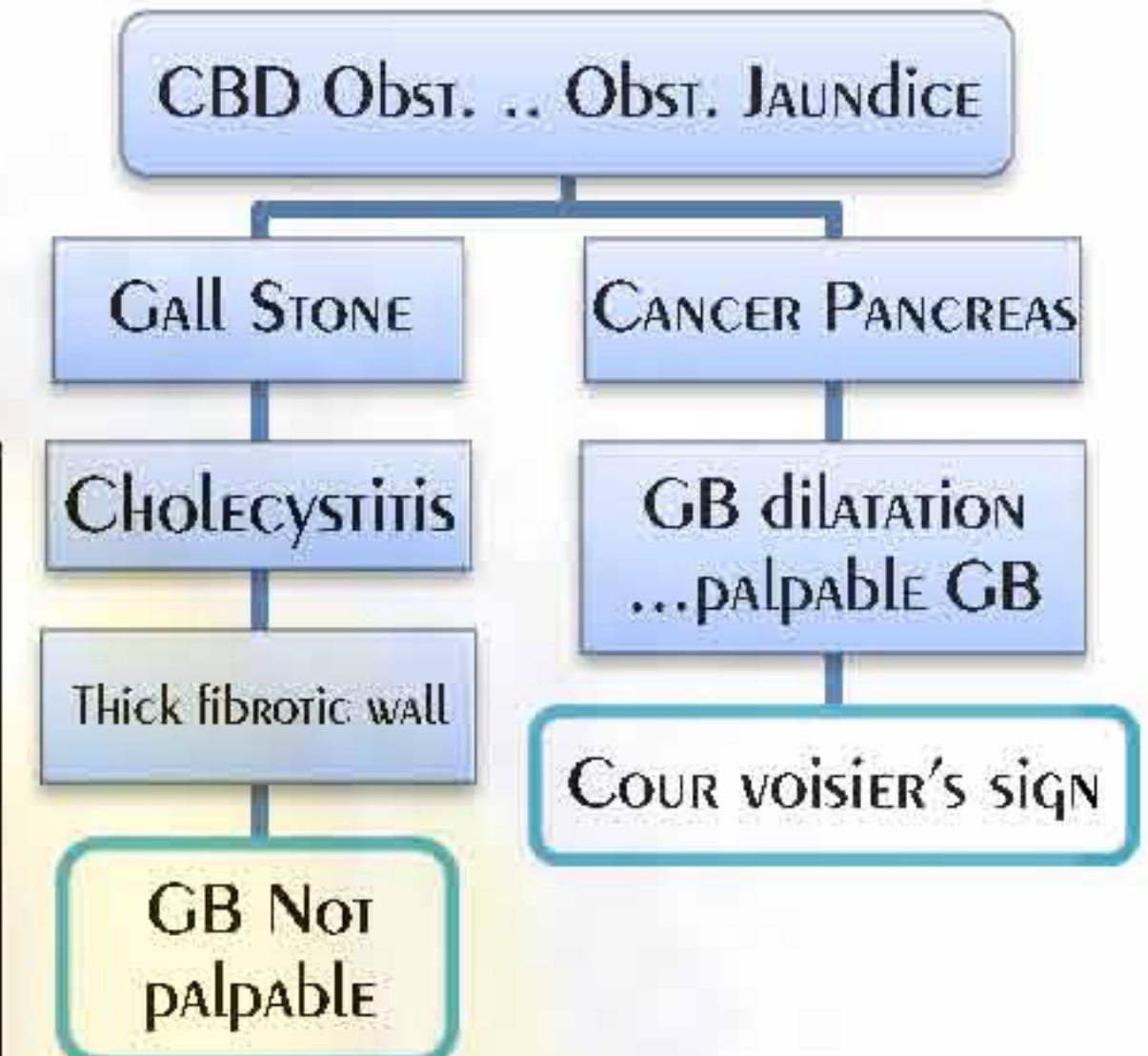
A) Local

B) Blood:

⇒ LATE TO LL BB RR.

C) Lymphatic:

- 1) LIVER ⇒ ASCITES / JAUNDICE.
- 2) PARA-AORTIC LN.
- 3) VIRCHOW'S LN "LT. SUPRA-CLAVICULAR LN"
- 4) TRANS-COELIMIC TO OVARIES "KRUKENBURG'S TUMOR"
- 5) MALIGNANT ASCITES.



➤ **INVEST = (BARIUM + Endoscopy for Biopsy + CT SCAN)**

BA SWALLOW ⇒ SHOULDER SIGN /
RAT TAIL APP.

BA MEAL ⇒ IRREGULAR FILLING DEFECT,
LINITIS PLASTICA

BA ENEMA ⇒ "DOUBLE CONTRAST"
TUMOR MARKER: **CEA**

- 1) TUMOR MARKER: **CEA / CA 19-9**
- 2) ERCP

➤ TREATMENT OF TUMORS

OPERABLE

- 1) RESECTION E END TO END ANSTOMOSIS.
Whipple op. (PANCREATIC-DUODENCTOMY)
- 2) RADIO & CHEMO-TH.

END STAGE

- palliative (STENT / LASER)
- RADIO-THERAPY & CHEMO-TH.

Irritable Bowel \$ = IBS

"functional bowel disorder without structural pathology"

1) UNKNOWN MAY BE: Mood disorders OR VISCERAL HYPER-SENSITIVITY.

- Stress
- Somato-sensation.
- GIT infection.
- Eating Disorder.

➤ CL./P (long history e long symptom e free intervals)

General	GIT Manifest.
1) Irritable person. 2) Dysmenorrea. 3) Headache. 4) Bad breath.	1) <u>RECURRENT ABDOMINAL PAIN: (lt. iliac fossa)</u> a) Rt. Hypo-ch. → IBS not GB b) Rt. Iliac fossa → IBS not chronic appendicitis. • ccc by ↓ by defecation or passing flatus. • Tenderness over sigmoid colon. 2) <u>CONSTIPATION OR DIARRHEA.</u>

➤ INVEST.: NO +VE findings.

➤ TTT.:

- 1) RE-ASSURE.
- 2) ↑ FIBRE diet e BRAN.
- 3) SMOOTH MS. RELAXANT "MEBEVRINE" → colic e DIARRHEA.
- 4) SSRI → colic e CONSTIPATION.

SSRI ARE USED IN ...

- ANXIETY.
- DEPRESSION.
- OCD.

	DIVERTICULAR DISEASE	FAMILIAL ADENOMATOUS polyposis
CL/P	<i>old age e long history of constipation</i> <i>e recent onset of lt. sided Abd. pain.</i> <i>Then Bleeding / Rectum.</i>	<u>Non-specific</u> • Abd. pain. • Bloody diarrHEA + MUCOUS.
PATHOLOGY	(LONG-STANDING CONSTIPATION) dt low fiber diet. ↓ ↑ intra-luminal pr. at the sigmoid colon. ↓ <i>pouches of mucosa extruding through ms. wall</i> <i>(at weak areas near BVs.) stagnation .. infection ... peritoneal</i> <i>irritation around the sigmoid colon then Bl./Rectum</i> ↓ DIVERTICULITIS	<u>AD ccc by:</u> • 100-5000 AdENOMA. • 100% PRE-CANCEROUS.
INVEST.	1) BA ENEMA. 2) ↑ ESR / TLC dt DIVERTICULITIS. 3) Spiral CT SCAN.	1) BA ENEMA ⇒ multiple small filling defects. 2) Endoscopy. 3) All relatives EXAMINED.
TTT.	• DIETARY FIBRES. • DIVERTICULITIS → ABS + FLAGYL. • RESECTION.	TOTAL COLECTOMY + ileo-RECTAL ANASTOMOSIS FOR FEAR OF CANCER.

GB STONE

Risk FACTORS:

CHOLESTEROL STONES	PIGMENTED STONES
(↑CHOLESTEROL / ↓BILE SALTS) IN BILE DT ↑HMG-CoA REDUCTASE • F > M F ATTY. LIVER CIRRHOSIS. • F ORTY. F ILTHY. OCP. • F ERTILE. Rapid wt. loss DM.	<u>complicates Jaundice</u> • CHA. "SPHERO-CYTOSIS" • OBSTRUCTIVE J. (CBD STASIS)
➤ CL./P	
1) ASYMPTOMATIC. (M/C > 80 %) 2) <u>PAIN</u> • RECURRENT COLIC. • RT. HYPO-CHONDRIAL OR EPIGASTRIUM. • RADIATES TO ⇒ BACK IF COMPLICATED.	
➤ COMPLICATIONS	
<u>Obstruction of...</u> a) NECK OF GB ⇒ BILIARY COLIC. b) CBD OBST. ⇒ JAUNDICE... • STASIS ⇒ INFECTION ⇒ CHOLE-CYSTITIS & CHOLAGITIS. • ACUTE PANCREATITIS ⇒ PAIN RADIATED TO BACK. c) Gall stone erodes GB wall T. ileum ⇒ GALL-STONE ILEUS FISTULA. <u>PRE-MALIGNANT</u>	
➤ TREATMENT	
Non-Surgical MEDICAL (URSO-FALC FOR PURE Ch. STONE) (USED IN Biliary CIRRHOSIS) ESWL Surgical LAPAROSCOPY CHOLESYSTECOMY ERCP REMOVAL of GALL STONE	

CHOLE-CYSTITIS

	ACUTE Cholecystitis	CHRONIC Cholecystitis
<u>PATHOLOGY</u>	GALL STONES $\Rightarrow$ OBSTRUCTION $\Rightarrow$ STASIS $\Rightarrow$ INFECTION.	CHRONIC GB INFLAM. + GALL STONES.
<u>CL./P</u>	1) <u>PAIN: severe</u> - Rt. hypo-chondrium or - Epigastrium mistaken for gastritis. - Radiates to Back & rt. Shoulder. 2) <u>$\pm$ N V.</u>	1) <u>PAIN:</u> - RECURRENT. - RT. HYPO-CHONDRUM <u>(B.S. & P.W.)</u>
<u>SIGNS</u>	1) Infection $\Rightarrow$ FEVER. 2) CBD obst. $\Rightarrow$ JAUNDICE. 3) <u>$\pm$ Murphy's sign:</u> RT. HYPO-CHONDRUM TENDERNESS $\Rightarrow$ WORSENS IN INSPIRATION.	1) ✗ 2) ✓ 3) ✓
<u>INVEST.</u>	1) <u>US.</u> "of Choice" 2) Blood: $\uparrow$ ESR, $\uparrow$ CRP & $\uparrow$ TLC. 3) LFT: $\uparrow$ BIURUBIN - TRANS-AM - ALP DT CHOLESTASIS	US
<u>TREATMENT</u>	<u>MEDICAL</u> - RAAA. (3rd GCS) - NOTHING / MOUTH. $\Rightarrow$ IV FLUIDS. - ANTI-EMETICS. <u>SURGICAL</u> CHOLYSTECTOMY	<u>LAPAROSCOPY ... Cholestectomy</u> A) <u>FOR FEAR of:</u> - CBD OBST. $\rightarrow$ OBST. J. ASC. CHOLANGITIS - PANCREATITIS. B) NOT for pain relief.

Asc. Cholangitis Charcot's Triad

- FEVER & RIGORS.
- Abd. PAIN.
- JAUNDICE.

PANCREATITIS

Acute PANCREATITIS

Impaired drainage of pancreatic duct due to GB stones / tumor

- ⇒ reflux of bile up to panc. Duct.
- ⇒ ⊕ pancreatic enzymes
- ⇒ auto-digestion of pancreas
- ⇒ hge & necrosis in s. cases.

Risk FACTORS

- 1) Gall STONE ⇒ CBD obst.
- 2) Alcohol ⇒ Alone.
- 3) ↓ IMMUNITY (HIV) ⇒ CMV / M. Avium.
- 4) IATROGENIC ⇒ ERCP.
- 5) DRUGS ⇒ STEROIDS.
- 6) INFECTIONS ⇒ Viral as Mumps.
- 7) METABOLIC ⇒ hyper-CALCEMIA
⇒ hyper-TRIGLYCERIDE
- 8) TUMOR ⇒ PANCREATIC TUMOR.

CHRONIC PANCREATITIS

"IRREVERSIBLE damage with PERMANENT impairment of PANCREAS"

➤ Risk FACTORS

- 1) HEREDITARY.
- 2) Ch. Calcifying PANCREATITIS. (Ch. Alcoholism)
- 3) TROPICAL → dt protein & fat mal-nutrition.
- 4) OBSTRUCTIVE → dt Pancreatic tumor.

➤ CL./P OF PANCREATITIS

- 1) **PAIN:** EPIGASTRIUM & RADIATES TO BACK (DD OF PU)
- 2) ± **N V.**
- 3) **ABD. TENDERNESS & GUARDING RIGIDITY.**
- 4) **ECHYMOSIS:** peri-umbilical ⇒ Cullen's sign.
flanks ⇒ Grey Turner sign.

TRIAD:

- 1) **PAIN:** EPIGASTRIC & RADIATES TO BACK.
- 2) **DM.**
- 3) **MAL-ABSORPTION \$** → STEATORRHEA. +
MARKED WT. LOSS DT ANOREXIA.

➤ COMPLICATIONS

PANCREATIC

Abscess / Ascitis
(↑ s. AMYLASE)

Pseudo-cysts
"dt Liquefactive
necrosis by CT / US"

SYSTEMIC

- 1) **METABOLIC** ⇒ ↓ s. Ca dt Ca⁺⁺ deposition +
HYPERGLYCEMIA
- 2) **RENAL** ⇒ "PRE-RF" dt hypo-volemia dt Ascites.
- 3) **CBD Obst** ⇒ JAUNDICE dt cong. & Inflam.
- 4) **LUNG** ⇒ ARDS. **Blood** ⇒ DIC.
- 5) **GIT** ⇒ paralytic ileus & GIT hge.

➤ INVEST.

- 1) ↑ s. AMYLASE. > 5X then fall rapidly the next day by renal clearance.
- 2) **CT SCAN / US.**
- 3) **PERITONEAL ASPIRATE** ⇒ ↑ AMYLASE.

RANSON'S SIGNS "POOR PROGNOSIS OF s. PANCREATITIS":

- | | |
|--|-------------------|
| 1) ↑ WBCs. | ↓ s. Ca. |
| 2) ↑ Blood GLUCOSE. "2 ^{ry} DM" | ↑ UREA dt PRE-RF. |

SAME + ...

- 4) Ca⁺⁺ in CT SCAN.
- 5) ↑ BL. SUGAR. "2^{ry} DM"

SEVERE epigastric pain

↓ BP + ARF "PRE-RF"

PU "بيخر"

ACUTE PANCREATITIS.

➤ TREATMENT

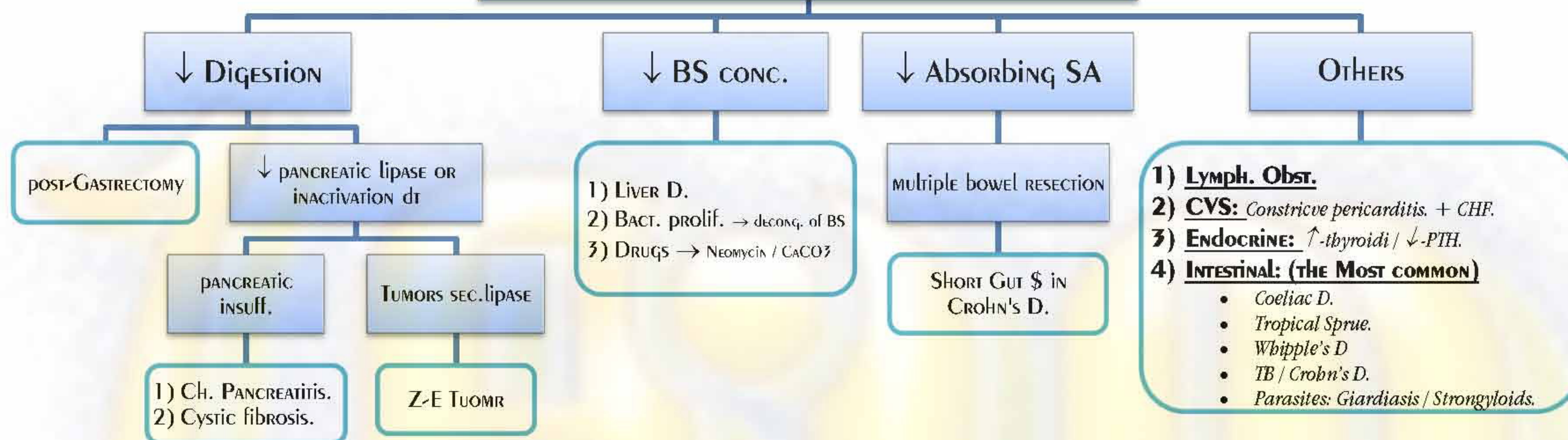
- 1) **Nothing / mouth** → NGT. "PUT PANCREAS AT REST"
- 2) **IV fluids & EI.**
- 3) **ANALGESICS.** (not Morphine as it contracts Ampulla of Vater)
- 4) **SOMATO-STATIN.** (↓ hormone release by pancreas)
- 5) **SURGERY** → PANC. Abscess or GB STONES in CBD.

- 1) **Stop Alcohol.**
- 2) **PAIN** → **NARCOTICS.**
- 3) **DM** → **Insulin.**
- 4) **MAL-ABSORPTION** → **SUPPLEMENT.**
- 5) **SURGERY** IF PAIN IS INTRACTABLE.

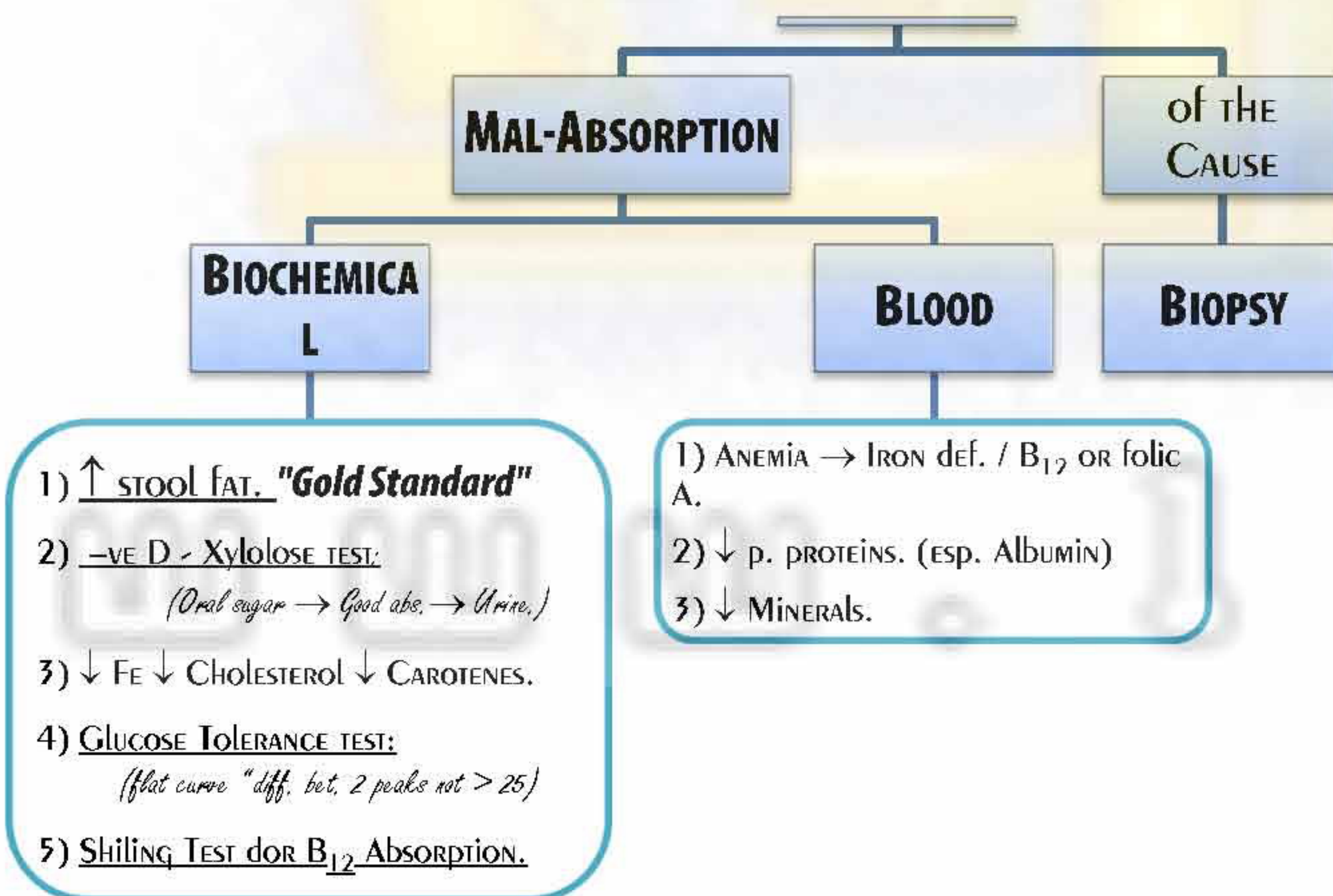
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MAL-ABSORPTION \$



INVEST. of Mal-Absorption...p.32



➤ CL./P of MAL-ABSORPTION \$

1) CHRONIC DIARRHEA (STEATORRHEA)

- GENERALIZED MALNUTRITION & Wt. loss.
- STOOLS ARE.... (soft – bulky – offensive – GREASY)

problem:

- Wt. loss.
- Abd. DISTENTION. BLOATING
- Ch. DIARRHEA doesn't respond to TTT.

2) METABOLISM:

- ↓ CHO → hypo-glycemia + FERMENTATION IN GUT by B. flora → FLATUS.
- ↓ FAT → Wt. loss.
- ↓ PROTEINS → CACHEXIA + OSTEOPOROSIS. "Bone pain"
- ↓ WATER abs. → NOCTURIA + hypotension dt ↓ bl. volume.

3) VITAMINS

- Vit. A → Night blindness / DERMATITIS.
- Vit. K → bl. TENDENCY. (1972)
- Vit. B₁₂ → PN / Megaloblastic AN. / SCD.
- Folic A. → Megaloblastic AN.

4) MINERALS

- Ca → TETANY / PARATHESIA + OSTEOMALACIA.
- IRON → ANEMIA.
- K⁺ → MS. WEAKNESS.

5) OF THE CAUSE → Whipple's – Coeliac – Tropical sprue.

MAL-ABSORPTION \$

	COELIAC DISEASE "GLUTEN SENSITIVE ENTEROPATHY"	Tropical Sprue	Blind loop \$ "INTESTINAL BACT. OVER-GROWTH"	Whipple's D
CAUSES	GLUTEN IN CEREAL ARE FRACTIONED TO gliadin peptides → injury to SI. <u>IMMUNE MECH. ?!</u> HLA-DQ2	ACUTE INFECTION IN RESIDENTS OR VISITORS TO TROPICAL AREAS.	1) <u>GASTRECTOMY.</u> 2) <u>Fistula</u> → Gastro-colic. 3) <u>hypo-motility</u> • Hypo-thyroidism. • DM • Scleroderma. 4) <u>hypo-γ Gb EMIA.</u>	CA: Tropheryma Whippelli.
<u>CL./P</u> MAL-ABSORPTION \$	<u>± AUTO-IMMUNE</u> Thyroiditis + DM (Type I) DERMATITIS HERPETIFORMS.	... + ACUTE INFECTION.	BACT. OVER-GROWTH CONSUME BS & B ₁₂ (MEGALO-BLASTIC AN. /SCD)	• LN++ • ARTHROPATHY. AS IBD.
INVEST.	• IgA • Biopsy ⇒ SUB-TOTAL villous Atrophy.	Biopsy ⇒ PARTIAL villous Atrophy.	1) <u>SCHILLING TEST</u> for B ₁₂ absorption. 2) <u>Glyco-colic Acid</u> <i>(Bile acid + ¹⁴C) → absorbed in LI → broken by B. flora to B. Acid + ¹⁴C w is absorbed in blood → expired through air.</i>	Biopsy ⇒ MO infiltrating the villi.
TTT.	GLUTEN FREE DIET.	ABS	ABS + SURGERY.	ABS

Important Notes in GIT

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GERD COMPLICATIONS

- 1) **Esoph. Ulceration** ⇒ **HEMATAMESIS & MELENA.**
- 2) **Healing by fibrosis** ⇒ **STRICTURE.**
- 3) **Barrett's Oesoph.** ⇒ **COLUMNAR METAPLASIA of LOWER OESOPH.**
⇒ **PRE-MALIGNANT ADENO-CARCINOMA.**
- 4) **Reflux Esophagitis.**

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DD OF GERD & ISHD

GERD	ISHD
✓ BURNING PAIN.	✓ RETRO-STERNAL HEAVINESS.
✓ PAIN RARELY RADIATES.	✓ PAIN RADIATES TO NECK, SHOULDER & BOTH ARMS.
↑ by DRINKING HOT LIQUIDS / ALCOHOL ✓ ↑ by BENDING OR LYING DOWN	✓ PAIN ↑ by EXERCISE.
✓ RELIEVED by ANTACID + ↑ by NITRATES.	✓ RELIEVED by NITRATES.
✓ NO DYSPNEA	✓ DYSPNEA.

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MISCELLANEOUS DISORDERS OF ESOPHAGUS

	DIFFUSE ESOPH. SPASM	ESOPHAGITIS	MALLORY WEIS	PERF. OF ESOPH.
Causes	Cork-Screw oesoph. In Ba meal	- Candida – H. Simplex – CMV. "Immune-comp." - Pills. Esp. (Bisphosphonate)	Cough → ↑ pr. → Mucosal tear at the Gastro-esoph. J.	Endoscopy. Spont.
Cl./P	• SEVER CHEST PAIN + DYSPHAGIA → see Other GIT Symptoms!!!	GERD	Hge - Mediastinitis	Mediastinitis
TTT.	NITRATES & CCB (They are # in GERD) BALLOON DILATION OR MYOTOMY.	• DRINK FLUID > 120 ML. • PPI + MOTILUM. • ANI-FUNGAL & VIRAL.	CONSERVE. LASER.	SURGERY.

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MISCELLANEOUS DISORDERS OF STOMACH & DUODENUM

	GASTRO-PARESIS	PYLORIC OBST.
CAUSES	1) AUTONOMIC NEUROPATHY. (DM / UREMIA) 2) SCLERO-DERMAS / PM. 3) POST-OPERATIVE,	1) DU /GU. (Active or healing by fibrosis) 2) CANCER STOMACH.
CL/P	Delayed GASTRIC EVACUATION ↓ Epigastric fullness + Early Satiety.	1) PROJECTILE VOMITING of yesterday's food → if persistent → loss of Acid → Alkalosis → TETANY. 2) DEHYDRATION → hypotension → pre-RF. 3) SUCCESSION splash.
INVEST.	Endoscopy	BA MEAL + Endoscopy.
TTT.:	Motilium	Fluids by NGT + SURGERY

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CASE of CHRONIC DIARRHEA

- 1) **MAL-Absorption \$.**
- 2) **IBD.**
- 3) **TB ENETRITIS.**
- 4) **HIV.**
- 5) **Thyro-toxicosis** → hyper-defecation.

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↑↑ IgA

- 1) **IgA Nephropathy.** (Mixed GN)
- 2) **HSP.**
- 3) **COELIAC DISEASE.**
- 4) **Alcoholic Cirrhosis.**
- 5) **INTRINSIC ASTHMA.**

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DIARRHEA followed by SYSTEMIC DISEASE:

- 1) **REITER \$.**
- 2) **HUS.**

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DD of Bloody DIARRHEA

- 1) **ULCERATIVE Colitis.**
- 2) **Amoibic / BACILIAR DYSENTRY.**
- 3) **CMV colitis.** "IMMUNO-COMP."
- 4) **MESENTRIC OCCLUSION**

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PAIN IN THE RT. ILIAC FOSSA:

- | | | |
|------------------|-----------|---------------------------|
| 1) Appendicitis. | | 6) Ovarian Torsion. |
| 2) Amoeboma. | "COECUM" | 7) Meckel's Diverticulum. |
| 3) Crohn's D. | | 8) PID. |
| 4) T. Ileitis. | "YESINIA" | |
| 5) IB\$. | | |

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NEURO-ENDOCRINE TUMORS = APUDOMAS:

- | | |
|----------------|-------------------------------|
| 1) GIT | → Carcinoid Tumor. |
| 2) PANCREAS | → Islet cell Tumors. |
| 3) Thyroid | → Medullary Carcinoma. |
| 4) Skin | → Melanoma. |
| 5) Adrenal GL. | → pheochromocytoma. |
| 6) Lung | → Carcinoid tumor & Small CC. |

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CARCINOID TUMOR & CARCINOID \$... (p.121 Cardiology)

Origin:	Appendix / T. Ileum / Rectum.
CL/P dr ↑↑ 5HT	1) VD → Flushing. 2) BS → Wheezy chest. 3) Intestinal motility → Watery Diarrhea.
Pathogenesis of Carcinoid \$:	> Tumor Cells Release 5HT → portal vein → liver to be metabolized → No manifest. > BUT if Liver Metastasis ... (Carcinoid \$) → leakage of 5HT to IVC → Rt. Side of heart → ⊕ fibro-genesis → TS / PS (rarely TI / PI) → then reach lung to be metabolized → Venous drainage to Lt. side becomes free of 5HT (No Affection on MV / AV except if Carcinoid \$ in lung)
Invest.	1) Urine → HIAA. 2) Sonar & CT for liver metastasis.
TTT	1) Octerotide. (Somatostatin Analogue). 2) Interferon.

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Intestinal pseudo – obstruction

- 1) CT diseases → Scleroderma + polymyositis.
- 2) Endocrinal → DM + hypo-thyroidism.
- 3) Amyloidosis.
- 4) Drugs → TCA.

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DD of 1st Biliary Cirrhosis & PSC

	1 st Biliary Cirrhosis	PSC = 1 st Sclerosing Cholangitis
CAUSE	AUTO-IMMUNE	AUTO-IMMUNE.
PATH.	INTRA-HEPATIC Biliary obst. Only.	INTRA & EXTRA-HEPATIC Biliary obst. → Biliary Cirrhosis
SEX	FEMALES	MALE = FEMALES.
CL./P	ITCHING THEN JAUNDICE	ITCHING WITH JAUNDICE
INVEST.	+VE AMA	• -VE AMA • +VE ANCA AS WEGNER'S GRANULOMA.
TTT.		UN-SATISFACTORY bec. v. AGGRESSIVE (STERIODS ± LIVER TRANSPLANT)

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ACUTE CHOLANGITIS

CAUSE	GALL STONE → CBD obst → STASIS → 2 nd INFECTION. (STRICTURE / TUMOR)
CL./P	CHARCOT'S TRIAD: • FEVER / RIGORS. • Abd. PAIN. • JAUNDICE.
INVEST.	LEUCOCYTOSIS / CULTURE. "E. Coli"
TTT.	ABS

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↑ s. AMYLASE:

- INTESTINAL obst. - PERFORATED PU
- CHOLECYSTITIS – ALCOHOLICS. (↑ SALIVARY AMYLASE)
- FALSE ↑ in:
 - A) RF.
 - B) Sulpha → PANCREATITIS.
 - C) Morphine → E OUT PANCREATITIS.

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CAUSES of hypo-ALBUMINEMIA → PERIPHERAL EDEMA.

1) ↓ SYNTHESIS	LIVER D. – CHRONIC INFECTIONS.
2) ↑ NEED	PREGNANCY.
3) ↑ LOSS	RENAL → NEPHROTIC S → HEAVY PROTEINURIA. <u>PROTEIN LOSING ENTEROPATHY:</u> • CANCER STOMACH – COLON. • IBD. • CHF → SVC. • MAL-ABSORPTION S.
4) ↓ INTAKE	MAL-NUTRITION.

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UNILATERAL SHIFTING DULLNESS:

- 1) TB. “dr LOCULATED ASCITIS”.
- 2) DISTENDED INTESTINAL LOOP.
- 3) OVARIAN CYST.